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University of Pennsylvania

An Inaugural Essay
on the Bilious Diseases which prevail
On the Rappahannock River,
Submitted to an examination
of the Medical Faculty,
by John C. Porter

of Virginia, For the Degree
of Doctor of Medicine

March 1829

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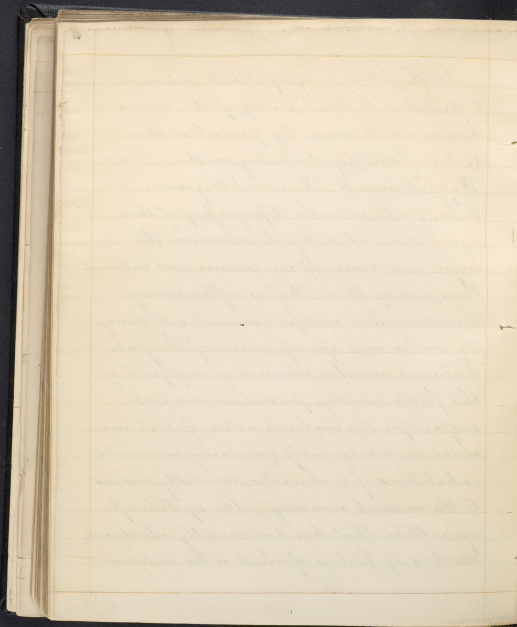
In August 1829
to the Board of Trustees
of the University of Pennsylvania
I have the honor to acknowledge
the receipt of your letter
of the 14th inst.

of the 14th inst.
of the 14th inst.

1829

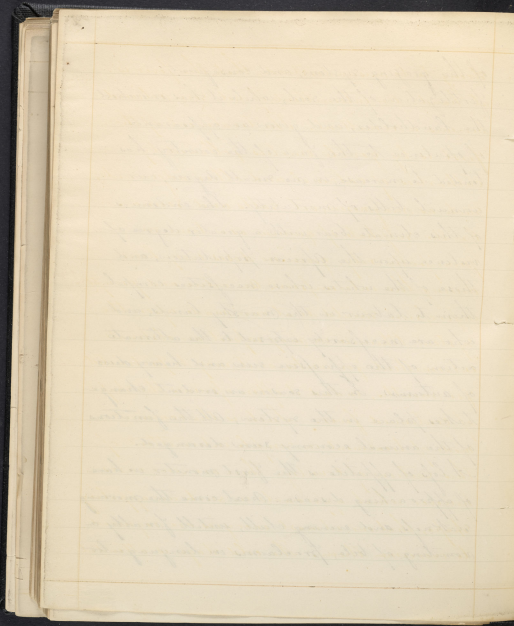
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In the following Essay I shall endeavour
to present a faithful history of the bilious
diseases which annually prevail in the
section of country bordering on the
Rappahannock River in Virginia.
Taking into view the topography of this
region, we are at no loss to determine the
origin and source of our summer and autumnal
fevers, and of those Bilious inflammatory
disorders which call for remedial aid during
the winter and spring seasons of the year.

Extensive marshes intersecting every part of
this fertile country, present an immense
surface for the combined action of heat and
moisture, consequently producing miasmatic
exhalations of a character, decidedly noxious
to the animal economy. The system of
agriculture that has been recently introduced,
the leading feature of which is the exclusion

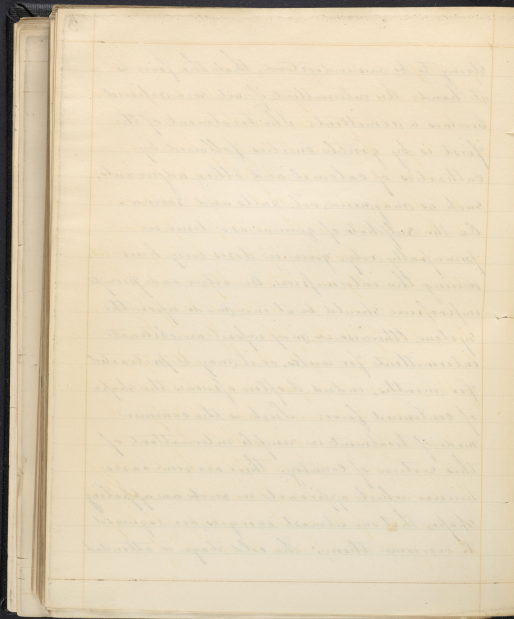


of the grazing system, and consequent fertilization of the soil, while it has enriched the landholder, and gives an appearance of opulence to the face of the country, has tended to increase, in no small degree, our annual bills of mortality. The endemics of this climate bear with a greater degree of violence upon the African populations, and those of the whites whose necessities compel them to labour in the marshy lands, and who are necessarily exposed to the alternate action of the oppressive sun and heavy dews of autumn. In this season an evident change takes place in the system; all the functions of the animal economy seem deranged.

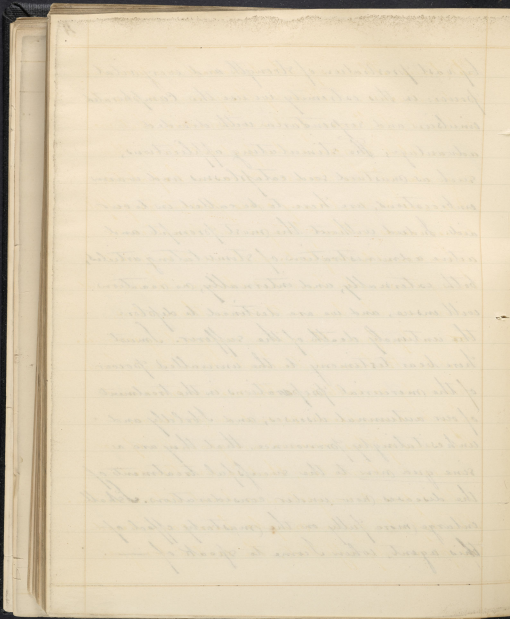
A loss of appetite is the first monitor we have of approaching disease: Next come the morning sickness, and evening chill, untill finally a vomiting of bile, proclaims in language too



strong to be misunderstood, that the fever is at hand: An intermittent, if not soon relieved becomes a remittent. The treatment of the first is by gentle emetics followed by cathartics of calomel and other adjuvants; such as magnesia, oil, salts and Verina. On the sulphate of quinine as a tonic we principally rely, given in doses every hour during the intermissions. An active and prompt impression should be at once made upon the system, otherwise we may expect an obstinate intermittent for weeks, or it may be protracted for months; indeed it often assumes the shape of continued fever. Such is the common mode of treatment in simple intermittent of this section of country: there are some cases however which approach in such an appalling shape, that our utmost energies are required to overcome them. The cold stage is attended



by vast prostration of strength and every vital power: in this extremity we use the Camphorated emulsion and resperdataria with decided advantages; The stimulating applications, such as Mustard seed cataplasms and warm embrocations, are here to be called in to our aid. Indeed without the most prompt and active administration of stimulating articles, both externally, and internally, no reaction will ensue, and we are destined to deplore the untimely death of the sufferer. I must here bear testimony to the unvalled power of the mercurial preparations in the treatment of our autumnal diseases; and I boldly and unhesitatingly pronounce, that they are a sine qua non to the successful treatment of the diseases now under consideration. I shall enlarge more fully on the masterly effect of this agent, when I come to speak of—

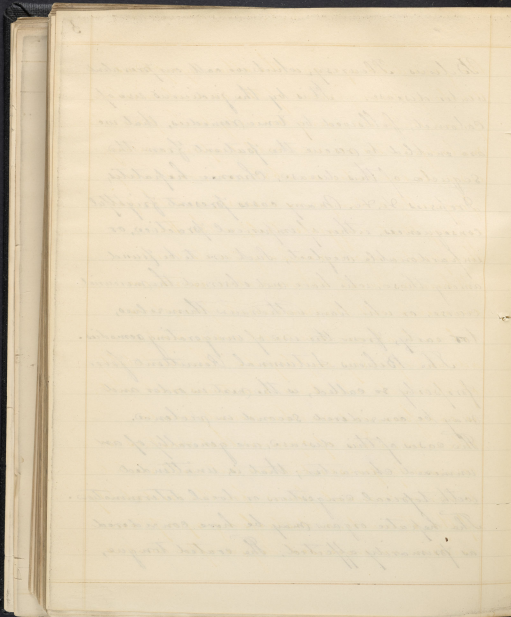


Bilious Pleurisy, which we call our prevalent winter disease. It is by the judicious use of Calomel, followed by tonic remedies, that we are enabled to rescue the patient from the sequela of this disease, Chronic hepatitis, Dropsies &c. &c. Many cases present frightful consequences, either of empirical practice, or unpardonable neglect; Such are to be found among those, who have not observed the mercurial course, or who have withdrawn them too soon, too early, from the use of invigorating remedies.

The Bilious Autumnal Remittent fever properly so called, is the next in order and may be considered second in violence.

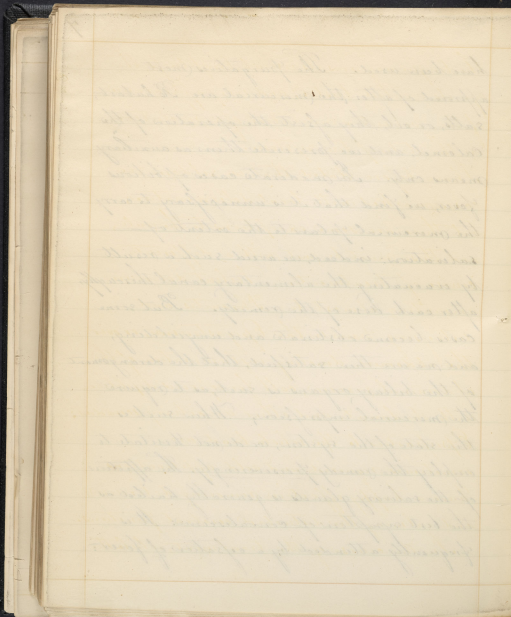
The cases of this disease, are generally of an unmixed character; that is, unattended with topical congestions or local determination.

The hepatic organs may be here considered as primarily affected; The coated tongue,



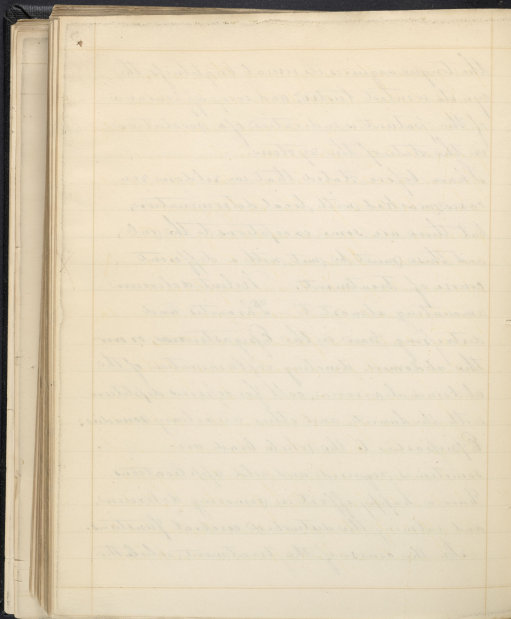
the jaundiced eye, and the other symptoms denoting derangement of the animal machine, point with unerring certainty to the prevailing Malady. (We are now called upon in many cases, to encounter an obstinate, and very frequently a dangerous disease; and the first enquiry that suggests itself is the the Therapeutic agent necessary for its cure—Where no local determination exists, we commenced with the mercurial purgatives: Calomel alone, is in most cases, most advantageously employed. The irritability of stomach, which we sometimes meet with, is excessive, and no other remedy can be retained. I am of opinion that emetics so commonly prescribed are not well suited to our autumnal fevers: for the irritability of the stomach, a distressing symptom, exists in an increased degree after emetics

have been used. The purgatives most approved of after the mercurial are Rhubarb, salts, or oil, they assist the operation of the Calomel, and we prescribe them as auxiliary means only. In moderate cases of bilious fever, we find that it is unnecessary to carry the mercurial plans to the extent of salivation: indeed, we avoid such a result by evacuating the alimentary canal thoroughly, after each dose of the remedy. But some cases become obstinate and unyielding, and we are then satisfied, that the derangement of the biliary organs is such, as to require the mercurial impressions. When such is the state of the system, we do not hesitate to employ the remedy perseveringly. The affection of the salivary glands is generally hailed as the best symptom of convalescence. It is frequently attended by a cessation of fever:



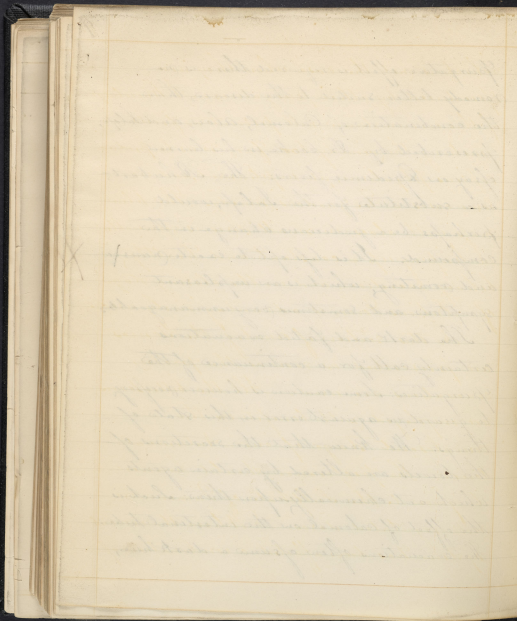
the tongue acquires its usual brightness, the eye its wonted lustre; and every appearance of the patient is indicative of a revolution in the state of the system.

I have before stated that we seldom see cases marked with local determination; but there are some exceptions to the rule, and these must be met with a different course of treatment. Violent delirium amounting almost to Phrenitis and distressing pain in the Epigastrium, or over the abdomen, denoting inflammation of the abdominal viscera, call for copious depletion with the lancet, and other auxiliary remedies: Epispastics to the whole head are sometimes required and cold applications have a happy effect in removing delirium, and calming the disturbed cerebral functions. In the course of the treatment, while the



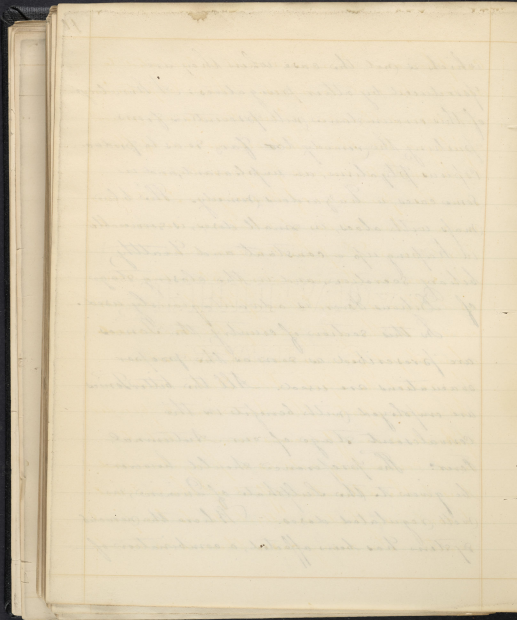
Purgative effect is required there is no remedy better suited to the disease, than the combination of Calomel, Aloes, and Salap, prescribed by Dr. Booke, in his learned essay on Epidemic fevers: The Rhubarb, as a substitute for the Salap, would perhaps be a judicious change in the compound. It is less apt to excite nausea and vomiting; which is an unpleasant symptom, and sometimes very unmanageable.

The dark and foetid evacuations certainly call for a continuance of the purgatives: Some caution is however necessary to guard us against error in this state of things. We know that the secretions of the bowels are altered by certain agents which act chemically upon them: Such is the effect of Calomel on the intestinal tube: The evacuations often assume a dark hue,



which is not the case when they are
 produced by other purgatives: A knowledge
 of this circumstance will prevent us from
 pushing the remedy too far, so as to produce
 copious Ptyalism, an unpleasant, and in
 some cases, a hazardous remedy. The blue
 mass with aloe, in small doses, is serviceable
 in keeping up a constant and healthy
 biliary secretion, and in the closing stage
 of Bilious Fever, is advantageously used.

In this section of country, the Tonics
 are prescribed as soon as the proper
 evacuations are used. All the better Tonics
 are employed with benefit in the
 convalescent stage of our Autumnal
 Fever: The preference should, however
 be given to the Sulphate of Quinine, in
 well regulated doses. Where the nervous
 system has been affected, a combination of



Camphor and Quinine is well calculated to restore its lost energies. The Eupatorium and Cornus Florida, of our Forests, are much employed by slave holders instead of the bark and its various preparations —

In the practice of this region Practitioners make a limited use of what are denominated Pefrigue or Diaphoretic remedies.

As soon as the evacuating Glass has been used, there is a solution of the fever in most cases. In the after part of the treatment, when slight fever arises with hot skin they resort to Spirt. Nitr. Dulc. and Abinder Spirt. The Antimonial powder of Rush is an efficacious remedy; but it most commonly acts as a purgative, and it is to the alterative effect of the Calomel it contains, that we attribute its beneficial result. In many cases there is so much,

The first of these is the
 fact that the population
 of the world is increasing
 rapidly. This is due to
 a number of causes, the
 most important of which
 are the increase in the
 birth rate and the decrease
 in the death rate. The
 birth rate has increased
 because of the improvement
 in the health of the
 population and the
 increase in the number
 of children born to each
 couple. The death rate
 has decreased because of
 the improvement in the
 medical science and the
 increase in the number
 of hospitals and clinics.
 The result of these two
 factors is that the
 population of the world
 is increasing at a rapid
 rate. This is a serious
 problem for the future
 of the world, as it will
 lead to a shortage of
 food and other resources.
 It is therefore necessary
 to take steps to control
 the population growth.
 This can be done by
 encouraging the use of
 birth control methods
 and by improving the
 health of the population.
 If these steps are taken,
 the population of the
 world can be kept under
 control and the future
 of the world can be
 secured.

gastric distress that antimonials are entirely excluded.

In closing my remarks on Bilious Autumnal Fever I am warranted in stating, that no such evil consequences have ever resulted, to persons treated on the Mercurial plan, as has been supposed by some.

The power of prejudice against all innovations on the Old School Lectures, and every thing in the growth of modern practice, has influenced in no small degree, the Oldest, and at one period, the most extensive Practitioner on the Rappahannock. I allude to—

Dr. Somerville of Essex County Virginia. His imagination has conjured up "Gorgons, Hydras, and chimeras dire," and fixed their existence in calomel and the lancet. Without the aid of these powerful remedies, he pretends to treat our Autumnal Bilious

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Fevers, (all of which he calls nervous)
Secundum artem, by the copious use of
 Sal. Ammoniac, Soudanum, and Bark,
 Every case of Hepatitis, arising from badly
 cured Fever, Obstructions of the liver, with
 Jaundice &c. he easily accounts for; by
 laying it at the door of that all destroying
poison Calomel. Such a practice as
 would inevitably follow from the adoption
 of this opinion, fortunately finds no
 advocates here; for if such were the case,
 most of those who have been spared to
 praise the virtues of the mercurial plan
 of treatment, would have long since, been
 "gathered unto their fathers". It can be
 safely asserted that the cases of Hepatitis
 on the Rappahannock River are as
 few as in any other miasmatic country;
 and it is equally certain that they are

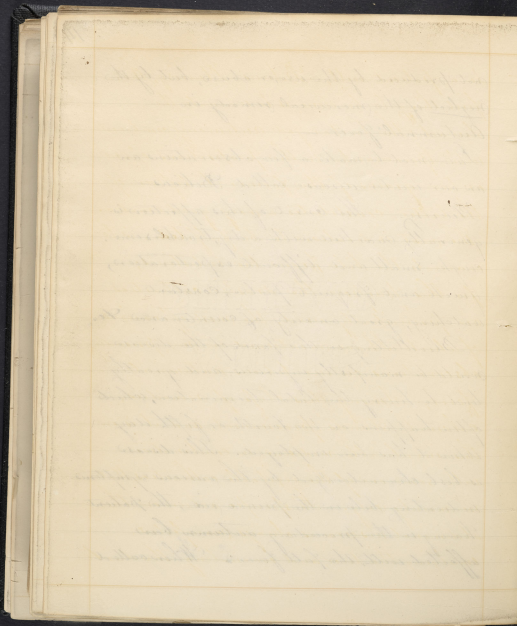
I have been thinking of you very much lately
 and wondering how you are getting on.
 I hope you are well and happy.
 I have been very busy lately
 but I have managed to find some time
 to write you a few lines.
 I have been thinking of you very much lately
 and wondering how you are getting on.
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not produced by the use, or abuse, but by the neglect of the mercurial remedy in Autumnal fever —

I am next to make a few observations on our winter disease called Bilious —

Murisy. The Onset of this affection is generally marked with a dry, troublesome, cough, small and difficult expectorations, quick and frequent pulse, constant watching, great anxiety of countenance &c.

Bloodletting in this form of the disease would be manifestly injurious, and greatly tend to hurry the fatal termination, which often happens on the fourth or fifth day when it has been employed. This disease is best characterized by the various symptoms indicating bile in the primæ viæ; the patient having in the preceding autumn been affected with the fall fever. When called



to a patient with Bilious Nourry, the first thing to be done is to evacuate the stomach; the tartarized antimony combined with Speccauanka in the proportions of one or two grains of the former to fifteen of the latter, constitutes a very good emetic.

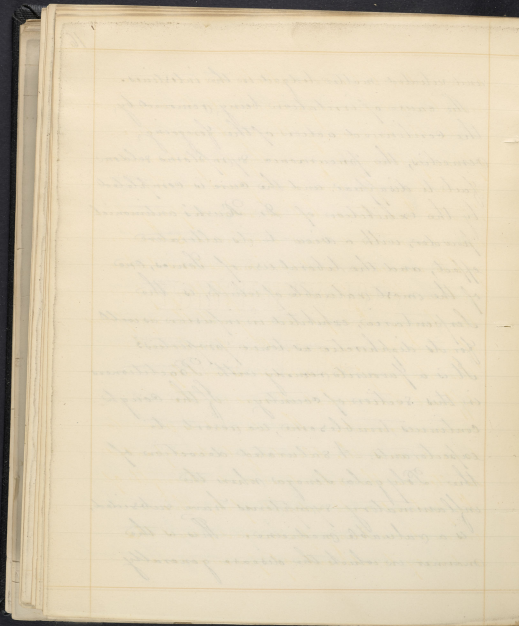
The next indication to be fulfilled, is to evacuate the bile from the intestines; for this purpose the drastic cathartics are principally used, the most efficacious of which, I have mentioned in my preceding observations on our bilious autumnal fever. Among this class of remedies, calomel stands preeminent, and it is on this invaluable medicine, in combination with some one of the vegetable cathartics, that we mainly rely. Its specific action on the abdominal viscera is always manifested; emulging the liver, and evacuating the dark

the first of the month, the weather was
very warm, and the sun shone
brightly. The wind was from the
south, and the sea was calm.
We went for a walk in the
park, and saw many beautiful
flowers. The children were
very happy, and played for
hours. We also saw many
birds, and a few small
animals. The day was very
pleasant, and we all enjoyed
it very much. We went home
at five o'clock, and had a
very good dinner. The
children were very tired, but
they were all happy. We
went to bed at ten o'clock,
and had a very good night's
sleep. The next day was
also very pleasant, and we
went for a walk in the
park. We saw many beautiful
flowers, and the children were
very happy. We also saw
many birds, and a few small
animals. The day was very
pleasant, and we all enjoyed
it very much. We went home
at five o'clock, and had a
very good dinner. The
children were very tired, but
they were all happy. We
went to bed at ten o'clock,
and had a very good night's
sleep.

and vitiated matter lodged in the intestines.

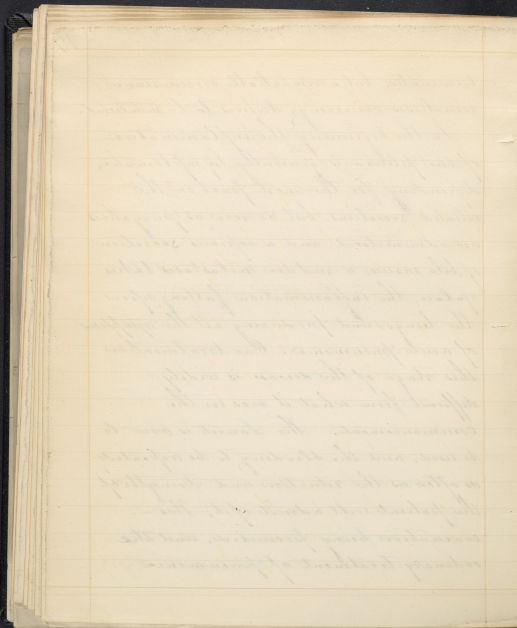
The cause of irritation being removed by the continued action of the foregoing remedies, the pneumonia symptoms seldom fail to disappear, and the cure is completed by the exhibition of Dr. Rush's antimonial powder, with a view to its alterative effect, and the liberal use of Tonics, one of the most valuable of which, is the Serpentaria, exhibited in infusion as well for its diaphoretic as tonic properties.

It is a favourite remedy with Practitioners in this section of country. If the cough continues troublesome, we resort to expectorants. A saturated decoction of the Polygala Senega when the inflammatory symptoms have subsided, is a valuable medicine. This is the manner in which the disease generally



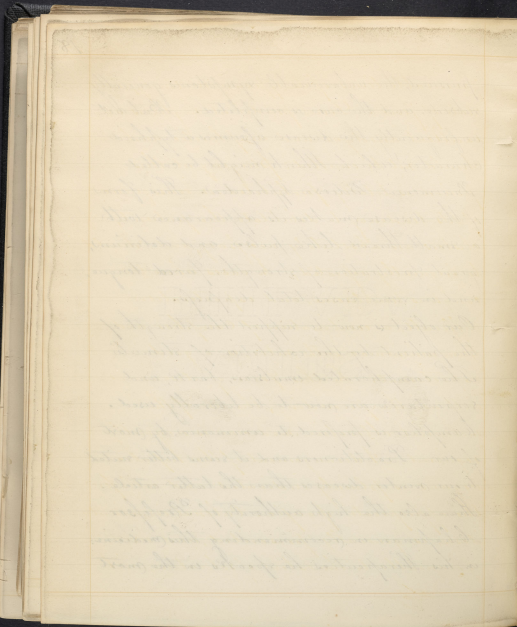
terminates, but a remarkable circumstance sometimes occurring, deserves to be mentioned.

In the beginning the inflammation of the pleura is generally symptomatic, depending for the most part on the vitiated secretions, but as soon as purgatives are administered, and a copious secretion of bile ensues, a sudden metastasis takes place, the inflammation falling upon the lungs, and producing all the symptoms of acute pneumonia. Our treatment in this stage of the disease is widely different from what it was in the commencement. The Lanet is now to be used, and the bleeding to be repeated as often as the situation and strength of the patient will admit of it; This evacuation being premised, and the ordinary treatment of pneumonia being

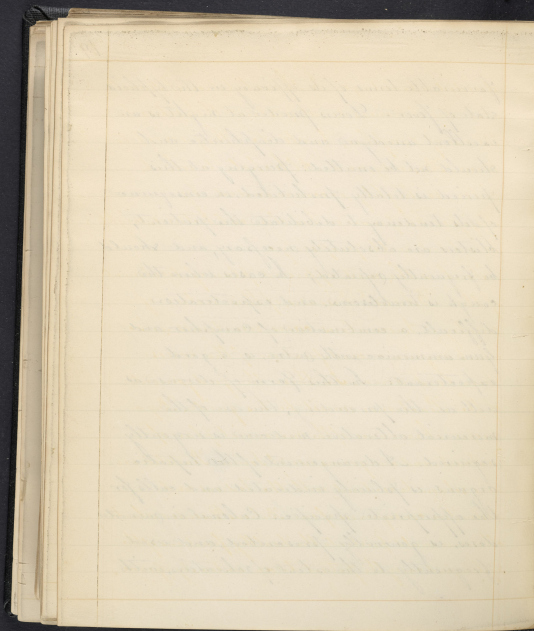


pursued, the unfavourable symptoms generally subside, and the cure is completed. But not unfrequently the disease assumes a typhoid character, which I think might be called *Pneumonia Biliosa Typhoides*. This form of the disease makes its appearance with a small thread like pulse, and delirium, great prostration of strength, furred tongue, and in some cases total deafness.

Our object is now to support the strength of the patient by the exhibition of stimuli. The camphorated emulsion, bark, and serpentaria are now to be liberally used. Camphor is preferred to ammoniac, by most of our Practitioners and it seems better suited to our winter diseases than the latter article. There also the high authority of Professor Chapman in recommending this medicine: in his Therapeutics he speaks in the most



favourable terms of its efficacy is the typhoid state of fever. Tovers powder at night is an excellent anodyne and diaphoretic and should not be omitted; purging at this period is totally prohibited, in consequence of its tendency to debilitate the patient; blisters are absolutely necessary, and should be frequently repeated; In cases where the cough is troublesome, and expectoration difficult, a combination of Camphor and Gum ammoniac with nitre, is a good expectorant: In this form of disease as well as the preceding, the use of the mercurial alterative medicine is urgently required. A derangement of the hepatic organs is plainly indicated and calls for the appropriate specific: Calomel in minute doses, is generally prescribed, and used frequently to the extent of salivation, with



decided advantage. In the exhibition of Stimuli also Practitioners do not restrict themselves to the use of camphor, bark &c. They resort to Wine, Brandy, and Alcohol, to which cider, so highly recommended by Professor Chapman in his clinical lectures, might be added with propriety.

Such is the most approved plan of treatment of the Bilious Diseases of this section of country. Anomalous cases sometimes arise which require a modification of the course here laid down. In these the judgement of the Practitioner must be his guide. By a proper observance of the Mercurial plan of treatment, and a vigorous use of Tonics, Practitioners have seldom to contend with the tedious and destructive consequences of our Bilious Disorders which otherwise would prostrate the healthy functions of the system, and carry the patient to an untimely grave.

